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500.28006C10

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: M. HORIGUCHI et al.
Serial No.: 10/813,240
Filed: March 31, 2004
For: A SEMICONDUCTOR DEVICE HAVING
REDUNDANCY CIRCUIT
Group: 2824
Examiner: J. HUR

LETTER REGARDING SUBMISSION OF SUBSTITUTE TERMINAL DISCLAIMER

Commissioner for Patents
POB 1450
Alexandria, VA 22313-1450

April 28, 2005

Sir:

Applicants, through their undersigned representative, respectfully request acceptance and formal entry of this paper including the accompanying Terminal Disclaimer in connection with the above-identified allowed application. Since the accompanying Terminal Disclaimer is being submitted as a substitute of an earlier, original disclaimer filed in the present application, which included payment of the appropriate fee amount directed thereto, at that time, it is requested therefor such fee amount be applied to cover the present Terminal Disclaimer. If, however, a separate fee is required to cover the filing of the current Terminal Disclaimer, it is respectfully requested that it be charged to the Account of the below-named law firm, as indicated hereinbelow.

The new (substitute) Terminal Disclaimer is being submitted to reflect the formal change in assignment in the above-identified application from **Hitachi, Ltd.** to that of **Renesas Technology Corp.** Although the Assignment was executed on December 20, 2004 by an authorized signing officer of the original assignee, Hitachi, Ltd., it was not delivered to the below-named law firm for filing in the USPTO for recordation until December 29, 2004, which is subsequently to the filing of the earlier, original Terminal Disclaimer as part of the response submitted on December 27, 2004. The Assignment was formally recorded in the United States Patent and Trademark Office on December 30, 2004, which is subsequent to the submission of the earlier Terminal Disclaimer. Accordingly, it has become necessary to submit a new (substitute) Terminal Disclaimer for purposes of reflecting the correct assignee's name.

In fact, the recent newly-executed Assignment, a copy of which (including the Recordation Cover Sheet) is attached hereto along with a copy of the received Notice of Recordation of Assignment document, was recorded in connection with each of the U.S. patent application(s) and/or Letters Patent in "Attachment A" of the Assignment, the list of which is shown as having been recorded on December 30, 2004 in the attached Notice of Recordation of Assignment document. With regard to this, it is noted that the referred to U.S. Patent No. 5,617,365 in the originally executed Terminal Disclaimer is also listed in the assignee's newly-executed Assignment. It is noted, also, the newly-executed Assignment not only includes the transfer of full ownership from the original assignee, Hitachi, Ltd. to Renesas Technology Corp. in connection with the named listings in Attachment A of the new Assignment but, in fact, covers, for example, continuations/divisionals thereof as well, beginning from the original U.S. patent Application Serial No. 07/419,399 in the

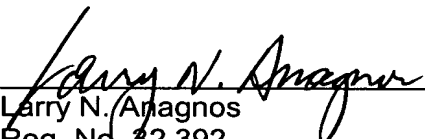
line of continuing applications to which benefit has been requested under 35 U.S.C. §120. (The opening paragraph on page 1 of the present specification details the continuing data information pertaining to the above-identified application.)

Therefore, the commonality of ownership in terms of the requirement pursuant to 37 CFR §1.321 in connection with filing a Terminal Disclaimer to obviate a judicially created double patenting rejection has been met.

The filing of the Substitute Terminal Disclaimer as well as executing the same by an attorney of record of the below-named law firm is in proper form consistent with the requirements of 37 CFR §1.321(c). Therefore, acceptance and formal entry of this paper including the accompanying properly executed Terminal Disclaimer is respectfully requested.

Please charge any shortage in the fees due in connection with the filing of this paper, to the Deposit Account of Antonelli, Terry, Stout & Kraus, LLP, Dep. Acct. No. 01-2135 (500.28006C10), and please credit any excess fees to such deposit account.

Respectfully submitted,
ANTONELLI, TERRY, STOUT & KRAUS, LLP



Larry N. Amagnos
Reg. No. 32,392

LNA/jjk
703-312-6600
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500.28006X00

ASSIGNMENT

WHEREAS, Hitachi, Ltd. is the exclusive owner, by assignment, of the following applications for Letters Patent of the United States of America and/or Letters Patent:

Listed In Attachment A

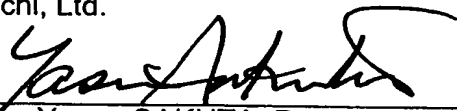
WHEREAS, Renesas Technology Corp., a corporation organized under the laws of Japan, having its place of business at 4-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo, Japan, is desirous of acquiring the entire right, title and interest in, to and under the inventions which are at least covered by the applications and/or Letters Patent as listed in Attachment A, as now owned by Hitachi, Ltd.

NOW, THEREFORE, for good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged, the said Hitachi, Ltd. has sold, assigned, transferred and set over and does hereby sell, assign, transfer and set over to the said Renesas Technology Corp., the entire right, title and interest of said Hitachi, Ltd. in the said inventions, including applications for Letters Patent and/or Letters Patent for which benefit under 35 U.S.C. §120 has been claimed in said applications and/or Letters Patents as listed in Attachment A, and where said applications and/or Letters Patent as listed in Attachment A include a Terminal Disclaimer with respect to commonly-assigned applications and/or Letters Patent, the entire right, title and interest of said Hitachi, Ltd. with respect to said commonly-assigned applications and/or Letters Patent to provide for common ownership thereof, and any reissue or reissues of said Letters Patents which may be granted, any continuations and divisions thereof and any Letters Patent issued or issuing thereon, the same to be held and enjoyed by said Renesas Technology Corp. for its own use and enjoyment, and for the use and enjoyment of its successors, assigns, or other legal representatives, to the end of the term for which said Letters Patents of the United States are granted or reissued as fully and entirely as the

same would have been held and enjoyed by the said Hitachi, Ltd., if this assignment and sale had not been made.

Hitachi, Ltd.

Date: 12/20, 2004


By: Yasuo SAKUTA, Patent Attorney
Title: Executive Officer
Intellectual Property Group
(Authorized Signing Officer)

ATTACHMENT A

US Application Serial No. 07/419,399, filed October 10, 1989;

US Patent 5,265,055, Issued November 23, 1993;

US Patent 5,617,365, Issued April 1, 1997;

US Patent 5,815,448, Issued September 29, 1998;

US Patent 5,966,336, Issued October 12, 1999;

US Patent 6,104,647, Issued August 15, 2000; and

US Patent 6,337,817, Issued January 8, 2002.

12/30/2004
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FORM PTO-1595
(Rev. 6-03)
OMB No. 0651-0011 (exp. 4/04)

RECORDATION FORM COVER SHEET
PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

Tab settings

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof

1. Name of conveying party(ies):

Hitachi, Ltd.

2. Name and address of receiving party(ies):

Name: Renesas Technology Corp.

Internal Address: _____

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

☐ Other _____

Street Address: 4-1, Marunouchi 2-Chome

Chiyoda-ku, Tokyo, Japan

City: _____ State: _____ ZIP: _____

Execution Date: December 20, 2004

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

07/419,399

B. Patent No.(s)

5,265,055; 5,617,365; 5,815,448;
5,966,336; 6,104,647, 6,337,817

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Antonelli, Terry, Stout & Kraus

Internal Address: _____

Street Address: 1300 N. Seventeenth St.

Suite 1800

City: Arlington State: VA ZIP: 22209

6. Total number of applications and patents involved: 7

7. Total fee (37 CFR 3.41) \$ 280.00

☒ Enclosed

☒ Authorized to be charged to deposit account (Excess Fees)

8. Deposit account number:

01-2135

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Melvin Kraus

Name of Person Signing

Reg. No. 22,466

Melvin Kraus
Signature

12-30-04

Date

Total number of pages including cover sheet, attachments, and document: 4

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231



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JANUARY 04, 2005

PTAS

ANTONELLI, TERRY, STOUT & KRAUS
MELVIN KRAUS
1300 N. SEVENTEENTH ST.
SUITE 1800
ARLINGTON, VA 22209

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UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/30/2004

REEL/FRAME: 015509/0462
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

HITACHI, LTD.

DOC DATE: 12/20/2004

ASSIGNEE:

RENESAS TECHNOLOGY CORP.
4-1, MARUNOUCHI 2-CHOME
CHIYODA-KU, TOKYO, JAPAN

SERIAL NUMBER: 07419399

FILING DATE: 10/10/1989

PATENT NUMBER:

ISSUE DATE:

TITLE: SEMICONDUCTOR DEVICE HAVING REDUNDANCY CIRCUIT

SERIAL NUMBER: 07818434

FILING DATE: 12/27/1991

PATENT NUMBER: 5265055

ISSUE DATE: 11/23/1993

TITLE: SEMICONDUCTOR MEMORY HAVING REDUNDANCY CIRCUIT

015509/0462 PAGE 2

SERIAL NUMBER: 09144258 FILING DATE: 08/31/1998
PATENT NUMBER: 5966336 ISSUE DATE: 10/12/1999
TITLE: SEMICONDUCTOR DEVICE HAVING REDUNDANCY CIRCUIT

SERIAL NUMBER: 08535574 FILING DATE: 09/27/1995
PATENT NUMBER: 5617365 ISSUE DATE: 04/01/1997
TITLE: SEMICONDUCTOR DEVICE HAVING REDUNDANCY CIRCUIT

SERIAL NUMBER: 09363000 FILING DATE: 07/30/1999
PATENT NUMBER: 6104647 ISSUE DATE: 08/15/2000
TITLE: SEMICONDUCTOR DEVICE HAVING REDUNDANCY CIRCUIT

SERIAL NUMBER: 08825605 FILING DATE: 03/31/1997
PATENT NUMBER: 5815448 ISSUE DATE: 09/29/1998
TITLE: SEMICONDUCTOR MEMORY HAVING REDUNDANCY CIRCUIT

SERIAL NUMBER: 09633271 FILING DATE: 08/04/2000
PATENT NUMBER: 6337817 ISSUE DATE: 01/08/2002
TITLE: SEMICONDUCTOR DEVICE HAVING REDUNDANCY CIRCUIT

PAULA MCCRAY, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS